REMARKS

Claims 1-6, 8-19 and 22-27 are pending in the application. Claims 7, 20 and 21 have been canceled. Claims 15-19 and 22-27 have been withdrawn from consideration.

I. CLAIM OBJECTIONS

Claims 15-27 have been objected to because the amended withdrawn claims should be labeled as withdrawn.

Applicants have labeled claims 15-19 and 22-27 as withdrawn. Claims 20 and 21 have been canceled.

II. REJECTION OF CLAIMS 1-14 UNDER 35 U.S.C. § 103(a)

Claims 1-14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Heidari (US 2003/0159608) in view of Willson et al. (US 6,334,960). (While the rejection lists claims 1-14, Applicants assume the Examiner intended to list claims 1-6 and 8-14, as claim 7 was previously canceled.) The Examiner acknowledges that Heidari does not teach a membrane that is transparent to a wavelength range of the radiation, the radiation source being positioned behind the membrane. The Examiner contends that it would have been obvious to use radiation transparent materials based on the teaching of Willson et al., motivated by a desire to have the radiation penetrate the desired layers and accomplish its intended purpose. The Examiner further contends that it would have been obvious to position the radiation source in such a place wherein it may accomplish its intended use.

Applicants traverse the rejection for at least the following reasons. Claim 1 recites an apparatus for transferring a pattern from a template to a substrate that includes a radiation source devised to emit radiation for solidifying the radiation polymerizable fluid surface layer on the substrate. A flexible membrane is devised to engage the template or substrate. The membrane is transparent to a wavelength

range of the radiation, the radiation source being positioned behind said membrane. The apparatus presently claimed solves the problems associated with the steps of heating and cooling the combined stamp and substrate in traditional imprint methods which bring about movement of the engaging surfaces due to different heat expansion coefficients. Moreover, the larger the area to be imprinted, the larger the actual expansion and contraction, which can make the traditional imprint process more difficult for larger surface areas. With the apparatus presently claimed, it is possible to imprint larger surface areas.

As acknowledged by the Examiner, Heidari fails to teach or suggest emitting radiation to the surface layer through the membrane, which membrane is transparent to a wavelength range of a radiation usable for solidifying the fluid surface layer. The Examiner relies on Willson et al. to cure the deficiencies of Heidari. However, contrary to the Examiner's assertion that the cited references relate to similar process, Applicants respectfully submit that one skilled in the art would not look to Willson et al. to modify the apparatus of Heidari. Specifically, the technique used in Willson et al. is completely different in nature than that of Heidari. The traditional "step and flash" process described in Willson et al. can only accommodate wafers of up to 8 inches. The imprint process must be repeated by lifting the template, moving it sideways, and then lowering it to the substrate again, by means of an X-Y translation stage. Furthermore, for each such step, renewed alignment was well as new deposition of polymerizable fluid must be performed. This "step and flash" technique is therefore very time consuming, and less than optimum for large scale production.

In addition, it appears that the Examiner has equated the transfer layer of Willson et al. to the flexible membrane recited in the present claims. Applicants respectfully disagree with the Examiner's position. According to claim 1, the membrane is part of the pressure cavity. Hence the cavity is defined by a part of the surface of the first main part, a flexible seal member arranged in and protruding from the first main part surface, and the membrane which engages the seal member. The flexible membrane of this arrangement is not equivalent to the functionality of the

transfer layer 20 of Willson et al. Willson et al. does not in any way disclose a membrane corresponding to the membrane recited in claim 1.

Even if one skilled in the art were somehow motivated to combine the teachings of Heidari with those of Willson et al., the resulting combination would not include all of the recited features of the apparatus presently claimed. Because prima facie obviousness has not been established, the rejection of claims 1-6 and 8-14 under 35 U.S.C. §103(a) should be withdrawn.

III. CONCLUSION

Accordingly, claims 1-6 and 8-14 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

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